

## **WARRANTY**

### **Full One-year Warranty**

Equator undertakes to the consumer-owner to repair or, at Equator Corporation's discretion, to replace any part of this product that proves to be defective in workmanship or material under normal personal, family or household use, in the USA or Canada for a period of one year from the date of original purchase.

#### **General**

Since it is the responsibility of the consumer-owner to establish the warranty period by verifying the original purchase date, Equator Corporation recommends that a bill of sale, delivery slip or some other appropriate payment record be kept for that purpose. This warranty gives you specific legal rights, and you may also have rights, which vary from state to state.

#### **Exclusions**

In no event shall Equator be liable for incidental or consequential damages or for damages resulting from external causes such as abuse, misuse, incorrect voltage or acts of God, or improper installation, neglect, including damage due to improper cleaning and/or maintenance or improper handling damage.

This warranty does not cover service calls, which do not involve defective workmanship or materials covered by this warranty. Accordingly, diagnosis and repair costs for a service call, which does not involve defective workmanship or materials will be the responsibility of the consumer-owner.

Equator will repair or replace at our discretion products that malfunction due to defective workmanship or materials. Most work is covered. The defining factor is, has the machine malfunctioned (Equator is responsible) or has the customer omitted or done something to cause machine to malfunction (customer is responsible.) Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

#### Contact Information

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95.63.400.01

## **REFRIGERATOR/UPRIGHT FREEZER**

## **INSTRUCTIONS FOR USE**



Model numbers:

**CRF 1200 W - CRF 1200 S - CRF 1200 B  
COMMERCIEL**

Please read these brief instructions carefully before using appliance. This manual contains important information that will help you obtain the best performance from your appliance. Save all accessories supplied with the appliance.

## Contents

1. Before installing the refrigerator/freezer.
2. How to use the appliance.
3. General Information on the use of the appliance.
4. Maintenance.
5. Troubleshooting
6. Safety
7. Technical data.
8. Installation.
9. Moving the door hinge

Disturbance	Cause	Equipment Required	Trouble-Shooting	Remedy
	because unit is too close to a heat source, or ventilation is insufficient.		servations. Check air circulation.	ter ventilation.
	Built-in thermometer is defective. User's thermometer is defective.	Electronic thermo-meter.	Check for correct thermometer readings.	Replace built-in thermometer if necessary.
	Ambient temperature is below 0°C. Refrigerant has collected in the condenser.	Electronic thermo-meter.	Symptoms resemble those of partially blocked capillary tube. Record ambient temperature.	Find a more suitable location for the unit, with higher ambient temperature.
Compressor runs continuously.	Doors do not fit snugly.	Piece of paper.	Insert paper between door and frame and close door. If paper can be pulled out without resistance, the door does not fit tightly enough.	Fold double-sided tape to a suitable thickness and press in between gasket and door. Pull gently in gasket at the relevant area. See Section 6.3.: Adjusting Cabinet Doors.
Rapid ice formation on freezer shelves.	As above.	As above.	As above.	As above.
Insufficient refrigeration.	User wishes lower temperature in unit.	Electronic thermo-meter.	Measure the exact temperature.	The cut-out temperature can be lowered by giving the thermostat phial a reduced surface contact with the aluminium evaporator. See section on automatic defrosting below.
Automatic defrosting does not function. Possibly due to ice formation on evaporator.	The cut-in temperature of the thermostat is too low. The thermostat phial has insufficient surface contact with the evaporator.	Electronic thermo-meter.	Measure temperature at phial. Temperature here must not be lower than the cut-out temperature. See Section 2: Thermostat Diagrams.	Increase the cut-in temperature of the thermostat by giving the phial a greater surface contact with the evaporator. If this does not help, replace the thermostat.

Disturbance	Cause	Equipment Required	Trouble-Shooting	Remedy
	Capillary tube.	of cloth.	evaporator with cloth with hot water. If refrigerant now can be heard to flow more quickly through the system, ice blockage in capillary tube is indicated. Alternatively: Stop compressor and let evaporator defrost. Start compressor again. In case of ice blockage, frost formation on the evaporator will increase initially and then return to its original level.	ing the Refrigerating System for Repairs. Blow N <sub>2</sub> through system. Install oversize service filter. Ensure careful evacuation. When rinsing system after first evacuation start compressor. Stop when warm. Evacuate system again. With heavy contamination of system it is necessary to repeat this process several times. Filter can be replaced again.
	No or very little compressor capacity.	Service valve, manometer and volumetric gauge.	Mount a service valve on charging pipe and check suction pressure. Pressure conditions indicate no or very little compressor capacity. Break off capillary tube approx. 5 cm from filter drier and discharge the refrigerant charge. Cut out filter drier. Cut through charging pipe. Test compressor. See Section 7.10: Using a Volumetric Gauge.	If volumetric check indicates insufficient compressor capacity, replace compressor. See Section 4.1.: Opening the Refrigerating System for Repairs. Note that defects in the compressor can be caused by complete or partial blockage at another point in the system. This situation must be remedied before a new compressor is installed.
	Capillary tube mounted incorrectly at injection site (roll-bond evaporator).		Symptoms resemble those of loss of refrigerant.	Replace refrigerating evaporator. See Section 4.4.: Replacing the Evaporator.
Insufficient refrigerating/freezing.	Thermostat is set too high.	Electronic thermometer.		Turn thermostat knob clockwise. Inform user.
	Thermostat is defective.	Electronic thermometer.	Turn thermostat knob clockwise. Check to ensure that phial is correctly installed. See Section 4.5.: Replacing the Thermostat. If necessary, see remedy.	Replace thermostat.
	Unit has recently been filled with large quantities of food.	None.	Question user about use of unit immediately prior to service call.	Instruct user about use of fast-freeze switch.
To be continued on the next page.	Ambient temperature is too high, possibly	Electronic thermometer.	Compare exact temperature with user's ob-	Arrange for better location of unit and/or bet-

## 1. Before installing the refrigerator/freezer

Be sure that the appliance is undamaged. Report any shipping damage to your dealer immediately. Wash the cabinet and interior with a mild unscented detergent and wipe dry. Do not use abrasive scouring powder, still wool or similar cleaning agents. Connecting the electrical supply: see section (7) and (8).

## 2. How to use the appliance

Control panel: See fig. (1) page 7.

1. Refrigerator light
2. Thermostat knob for refrigerator section
3. Thermostat knob for freezer section
4. The control lamp emits a green light, when the power is on
5. The control lamp emits a yellow light, when the fast-freeze switch is activated
6. Deep-Freeze button
7. Thermometer for freezer section
8. The control lamp emits a red light/ flashes red, when the temperature is too high. The control lamp might emit a red light or flash during the freezing process - this is normal



The thermostat is adjustable from 0 (off) to 7 (coldest). It is recommended that you set the thermostat to position 4 when you first use it, then adjust the temperature as needed until the desired temperature is achieved.

### The refrigerator section

Never store hot food in the cabinet. Remember to always wrap or place food in sealed containers before placing into refrigerator.

The evaporator section of the refrigerator defrosts automatically. The melted ice flows into a tray on top of the compressor where it evaporates.

### The freezer section

Control Panel. See fig. (1) page 7. Deep-Freeze: Push the button (6). The

yellow light will turn on and the deep-freezing process begins. Push the button (6) again when the food is frozen solid, and the yellow light will turn off. Deep-freezing more than 6 1/2 pounds of food will require approximately 24 hours.

It is important that the deep-freezing takes place as quickly as possible. Therefore, food should be at room temperature when placed in freezer.

Consult a manual or handbook to find out the best procedures and packaging materials for deep-freezing.

Food should be arranged to allow maximum contact with the freezing shelf. Open the door only when necessary. The alarm light, fig. (1) page 7 indicates when the alarm is on. If the light is on, the alarm will sound if the temperature is too high.

Please note that the ice cubes, if consumed immediately after removal from the freezer, may result in freezer-burn. Ice cubes should be allowed to warm slightly before consumption.

## Defrosting

Items in the freezer will cause frost to form. A thin layer of frost does not affect the performance of the freezer.

Loose frost may be removed carefully with a plastic or wooden scraper. Never use a knife or other sharp tools. When the layer of frost on the shelves is 1/4" - 1/2" thick, the freezer should be defrosted.

Note: The layer of frost on the front edge of the top-freezing shelf may grow slightly thicker.

### To Defrost:

Turn off the freezer.

Remove food and wrap in newspaper, a blanket or similar insulating material and store them in as cold a place as possible.

Place a bowl of hot, but not boiling, water in the freezer.

Unfold the drain spout, attach the enclosed extension and place a bowl under it, fig. (3) page 7.

Wipe out the cabinet with a towel or dry cloth when the frost has melted.

### 3. General Use of the appliance

The shelves of the refrigerator section are adjustable, fig. (5) page 7.  
The door rack and the butter- and cheese-boxes are also adjustable, fig. (2) page 7.  
Pull to open freezer shelf door.  
To remove the drawers, lift them over the stop pins, fig. (4) page 7.  
If the appliance is not going to be used for more than 48 hours the doors should be left open to avoid odors.

The appliance is equipped with a high quality condenser, which under normal circumstances may cause the exterior sidewalls of the appliance to be slightly warm.

#### Lighting

Under normal circumstances, the interior light of the refrigerator comes on when the door is opened and turns off when closed. As an energy saving feature, the appliance is equipped with a switch that turns off the light if the door is left open or ajar for an unusually long period. After the door has been closed for a few minutes, the switch turns off and the interior light will operate normally.

#### Important

If the power cord is damaged it must be replaced with a cord of the same type by an authorized service technician.

### 4. Maintenance

Use only unscented detergents when cleaning the interior of the refrigerator/freezer.

When cleaning the interior, turn off and unplug the appliance.

The trim skirt at the foot of the appliance can be removed to facilitate cleaning of the floor under the appliance. See fig. (1) page 6.

The drain in the refrigerator must be cleaned periodically.

### DISPOSAL OF THE APPLIANCE

The appliance contains recyclable materials. When disposing of the appliance, please contact the service agent or other appropriate authority in your municipality. They can inform you of the collection and recycling measures used in your community.

If your old refrigerator is still around the house but not in use, be sure to remove the doors. This will reduce the possibility of danger to children.

Do not allow children to climb, stand or hang on the shelves in the refrigerator. They could damage the refrigerator and seriously injure themselves.

### 5. Troubleshooting

Before calling a service agent, make sure:  
the appliance is properly plugged in  
the fuse is intact  
the power has not been turned off  
all controls are correctly set  
the freezer is not over-filled with food.

Set the thermostat to 0 and leave appliance turned off for 15 minutes. Turn the thermostat back down to begin cooling again.  
After five minutes check for frost on the evaporator.

Do not open the refrigerator unless necessary. If the break lasts a long time (more than 12 hours) store food in another freezer. Most food, if thawed on the outside but otherwise solid, can be re-frozen.

Disturbance	Cause	Equipment Required	Trouble-Shooting	Remedy
No-Frost.			Check if blade is fixed correctly on shaft.	Blade must turn so that air flow only can be sucked in and blown out in the right places. Blade must cover 10 mm of shaft end.
			Check if timer is set in defrosting position.	Turn timer forward.
No-Frost.	Evaporator blocked by ice.		Check for snug fit of doors, cable or tube wall ducts. Check if timer is under tension when set at defrosting (remember that timer is only under tension when freezer thermostat is cut in). Check bimetallic thermostat and thermal fuse. Bimetallic thermostat can only be checked when the evaporator is cold (colder than -5°C). Check if heating element is under tension. Furthermore, when the doors have been open for a long time, the evaporator may be blocked by ice. Even though the compressor runs continuously, up to 10 hours will elapse before the next defrosting takes place. There will be no cooling in this period.	Repair leakage. Check electric connections and contact unit of timer.
Refrigerates/freezes too little or not at all. Compressor runs continuously.	Capillary tube completely or partially blocked (material from filter in capillary tube opening). Capillary tube is inserted so far up in the filter that touches the filter net.	Service valve, manometer and dry nitrogen (N <sub>2</sub> ).	Mount valve on charging pipe. Measure suction pressure. Check pressure equalizing time. See Section 3.7.: Using a Manometer in Trouble-Shooting. Break capillary tube approx. 5 cm after filter. Blow N <sub>2</sub> through charging pipe and check flow through capillary tube and filter.	See Section 4.1.: Opening the Refrigerating System for Repairs.
	To be continued on the next page.	Hot water and piece of cloth.	Heat injection area on evaporator with cloth.	See Section 4.1.: Opening the Refrigerating
Ice blockage in capillary tube.				

Disturbance	Cause	Equipment Required	Trouble-Shooting	Remedy
			<p>1. Compressor continues to run.</p> <p>2. Dismount and separate brown and black wires.</p> <p>3. Compressor continues to run.</p> <p>4. Compressor stops.</p> <p>5. Replace thermostat.</p>	<p>4. Check internal wiring for short circuit (fast-freeze switch).</p> <p>5. Replace thermostat.</p>
Compressor starts normally but stops again.	Extremely high voltage.	Voltmeter.	Measure voltage.	Inform user.
	High ambient temperature. Poor ventilation.	Electronic thermometer.	Measure temperature and check ventilation around compressor.	Improve ventilation.
	Can be normal.	None.	Check temperature in unit.	Inform user.
Refrigerates/freezes too much, normally, too little or not at all. Compressor may run continuously.	Leakage in system with resulting loss of refrigerant (R12).	Electronic leak detector, liquid leak detector (Leak-Tec) or liquid soap, dry nitrogen ( $N_2$ ) for increasing pressure in system. Dentist's mirror.	<p>Symptom: Evaporator not wholly utilized. Localize leakage with electronic leak detector - first at soldering joints, pipes and compressor in motor compartment, next in the evaporator and condenser. When leakage has been localized, cover area with a layer of Leak-Tec or liquid soap. Bubbles will appear at the exact site of leakage. Check pressure side with compressor running and suction side when pressure is equalized. If refrigerant pressure is insufficient for leak detection, install a service valve on charging pipe and add R12 and <math>N_2</math> (approx. 10 kg/cm<sup>2</sup>). Repeat leak detection.</p>	<p>After repairing leakage, repair system as in the case of ice blockage in capillary tube. See relevant section in chart.</p>
No-Frost.	Fan is not operating.		<p>Electric connections. Check if blade is fixed properly on shaft.</p> <p>Check if blade is locked mechanically.</p>	<p>Blade is fixed or replaced.</p> <p>Fittings for fan or air guiding duct are adjusted or replaced.</p>
No-Frost. To be continued on the next page.				

## 6. Safety

Do not store gas, cigarette lighters, ether or other explosive substances in the refrigerator.

Discarded refrigerators may become dangerous to children at play. Doors must be removed so that children cannot become trapped in the cabinet.

Never store liquids containing carbon dioxide in the freezer section.

Ensure that the refrigerator door can be opened far enough so that all drawers can be opened and/or removed from the appliance. See fig (2e).

Dimensions for installing a built-in unit are not included in this manual.

For safety reasons, grounded wall sockets should be installed at least six feet from the floor.

Any local installation rules for large appliances must be observed.

The power supply to the unit can be interrupted due to storms or other events. You should be aware of this when installing the appliance in a location where a power outage will not be immediately noticed. Construction and details, accessories and specifications in this manual are subject to change without notice.

## 7. Technical Data

This appliance meets the provisions of the following directives:

89/336/EEC (electromagnetic compatibility), 73/23/EEC (electrical equipment designed for use within certain voltage limits) as amended.

Household appliances sold in the EU also meet 96/57/EEC (energy efficiency requirements) as amended.

The rating plate, which is placed either at the back or inside the appliance, see fig. (7) page 7, provides various technical information as well as type and serial number.

## If the cabinet is to be adjusted:

See drawings (1) page 6

Take hold of the front panel with both hands. Then lift up the front panel and turn out the bottom part.

## Adjust the tilt of the unit

See drawings (1) page 6 by turning the adjustable feet with a 13 mm spanner.

## 8. Installation

See illustrations (1) and (2) page 5. Install the appliance in a cool, dry place. The appliance should not be exposed to direct sunlight or any other heat source.

### Leveling

Level the appliance by adjusting the feet at the front edge of the base. If installing the unit on a carpeted or wooden floor you should re-adjust the legs after a few days to allow for any settling.

The refrigerator should not be rest against a wall on its hinged side

The refrigerators can be built in or placed side-by-side with other appliances as long as there are 2 inches between each unit.

There must be 4 inches of open space above the unit to allow for proper airflow. See fig. (2a) and (2b) or an air duct that leads the air up over the top of the cupboard, see fig. (2c).

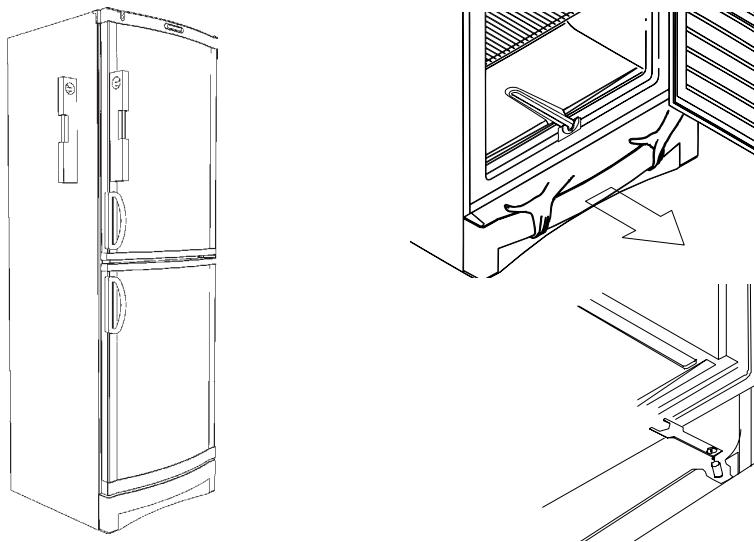


Fig. 1.

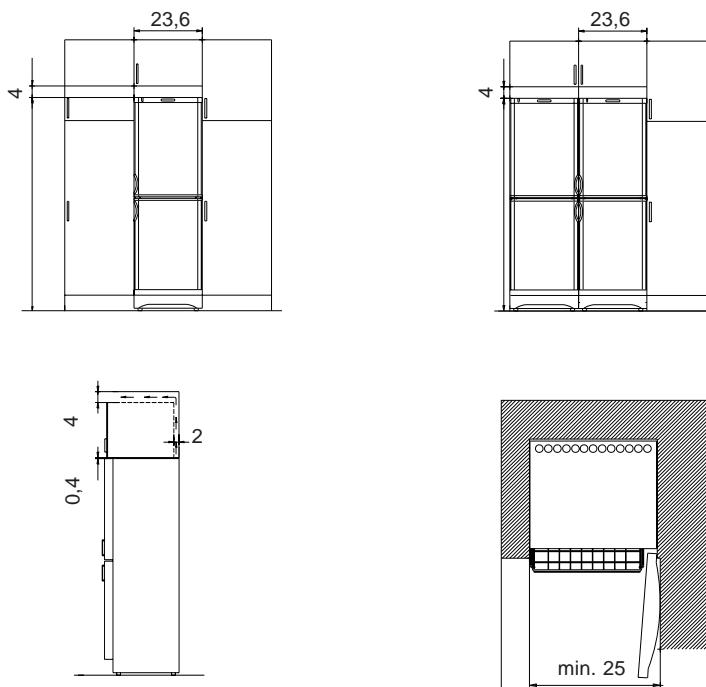


Fig. 2.

Disturbance	Cause	Equipment Required	Trouble-Shooting	Remedy
			start-up.	does not start, open the system and blow through with N <sub>2</sub> .
	Locked rotor (fault in compressor).	Ammeter, service valve and dry nitrogen (N <sub>2</sub> ).	Check that compressor hums and picks up total starting current. Open system. Blow N <sub>2</sub> through system.	If system (filter) is not blocked, replace compressor.
	Ambient temperature very low. Oil in compressor too cold, possibly in connection with undervoltage.	Electronic thermometer, voltmeter.	Measure ambient temperature. Measure voltage.	Find a better location for the unit. Condenser can be insulated if necessary, but DON'T FORGET to remove again if ambient temperature increases.
	Compressor tries to start but does not always succeed on first attempt.	Can be normal. Ventilation is perhaps insufficient.	Electronic thermometer.	Measure temperature of compressor housing (max. 90°C) and filter (max. 60°C). Find a better location for the unit. Arrange ways for better ventilation.
	Refrigerates/freezes normally. Compressor tries to start but does not succeed on first attempt.	Standstill time for compressor is too short.	Timer.	Check for snug fit of doors. Time standstill period for compressor. For pressure equalizing time see Section 3.7.: Using a Manometer in Trouble-Shooting. If standstill time is too short, replace thermostat.
	Compressor runs continuously. Unit refrigerates/freezes normally or too much.	Thermostat phial is incorrectly installed.	Electronic thermometer.	Check location of phial. See Section 4.5.: Replacing the Thermostat. Correct the fault. Cut-out temperature can be raised by giving the phial a greater surface contact with the evaporator.
		Ice formation around thermostat phial.	Electronic thermometer.	Defrost unit. Inform user.
		Thermostat set too low.	Electronic thermometer.	If compressor stops, inform user about function of thermostat.
		Ice formation in phial tube.	Electronic thermometer.	Defrost unit. Remove thermostat phial, dry thoroughly and replace. Repeat until the phial is dry. Seal with putty.
To be continued on the next page.		Defective thermostat.	Electronic thermometer.	1. Turn thermostat knob to zero. 2. Compressor conti-

Disturbance	Cause	Equipment Required	Trouble-Shooting	Remedy
Unit does not refrigerate or freeze, compressor does not operate.	Wall socket is dead.	Voltmeter or test lamp.	Check installation.	Install new fuse if necessary. Inform user.
	Mains cable is defective.	Voltmeter or test lamp.	See Section 3.2.: Trouble-Shooting in the Electric Circuit.	Repair or replace socket or mains cable.
	Thermostat is defective.			Replace thermostat.
	Defective winding in compressor.	Ohmmeter.	See Section 3.5.: Trouble-Shooting for Electrical Faults in the Compressor.	Replace thermostat.
	Starting device is defective.	New starting device.	See Section 3.2.: Trouble-Shooting in the Electric Circuit.	Replace starting device.
	Wiring for starting device is incorrectly installed.	Wiring diagram.		Correct in accordance with wiring diagram on back of unit.
	Timer is set in defrosting position.			Turn timer knob past defrosting.
No-Frost.	Insufficient mains voltage.	Voltmeter.	Check mains voltage.	Inform user that installation should be repaired by an electrician.
	Wrong or defective starting device.	New starting device.	See Section 3.2.: Trouble-Shooting in the Electric Circuit.	Install new starting device.
	Wiring for starting device is incorrectly installed.	Wiring diagram.		Correct according to wiring diagram on back of unit.
	Winding fault in compressor.	Ohmmeter.	See Section 3.5.: Trouble-Shooting for Electrical Faults in the Compressor.	Replace compressor.
	Condensing pressure too high (obstruction in capillary tube).	Manometer, service valve and dry nitrogen ( $N_2$ ).	Open system and localize obstruction by blowing $N_2$ through system. See Section 4.1.: Opening the Refrigerating System for Repairs.	Remove the filter drier and 5 cm of the capillary tube. Blow through the system thoroughly before installing new filter.
	Oil present in system after horizontal transport.	None.	Question user about mode of transportation and time interval between installation and	Let unit stand for several hours at warm temperature and try to start again. If compressor
	To be continued on the next page.			

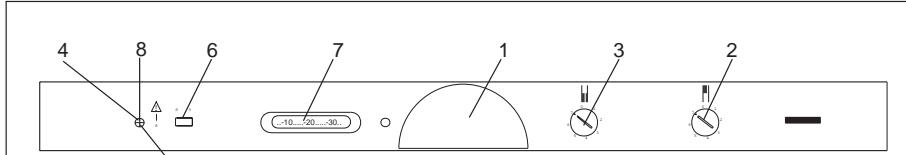


Fig. 1.

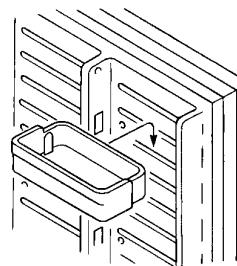


Fig. 2.



Fig. 3.

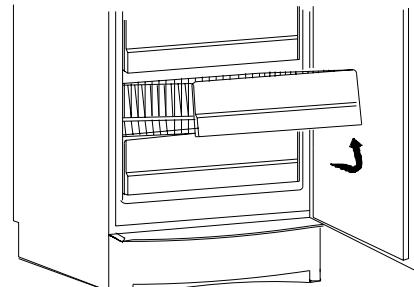


Fig. 4.

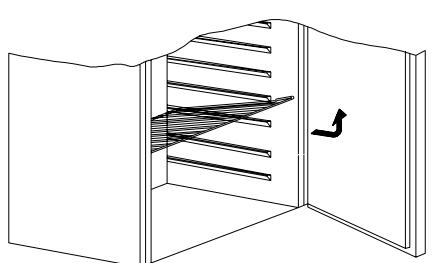


Fig. 5.

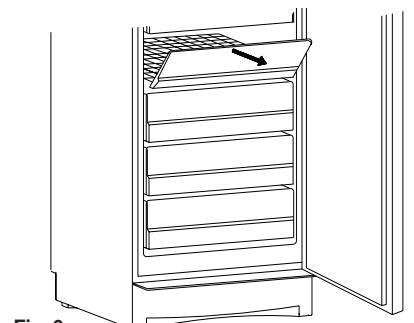


Fig. 6.

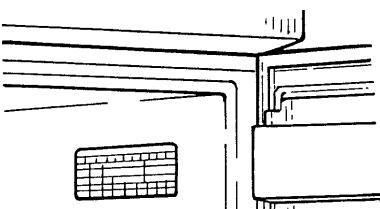
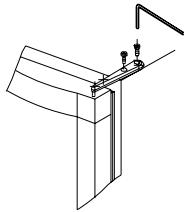


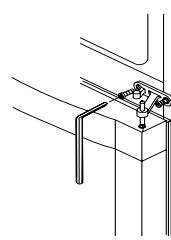
Fig. 7.

## 9. CHANGE OF HINGE SIDE

- 1) Remove top hinge and set aside. Lift upper door off of mounting peg and remove.

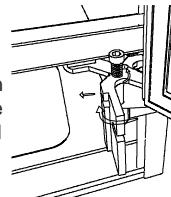


- 2) Remove the middle hinge. Lift off the bottom door. Re-attach the hinge screws.

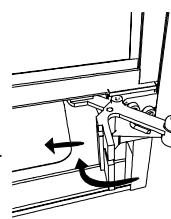


- 3) Remove the kick panel.

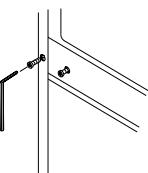
- a) Only for appliances with a door closer on the bottom door. The door closer is moved to the second hole.



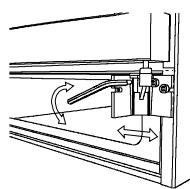
- b) The bottom hinge is dismounted at the 3 screws. The hinge is turned 90° and mounted on the opposite side.



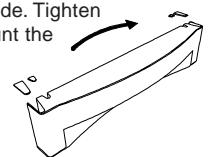
- 4) Remove the screws in the middle of the new side. Mount the bottom door and attach the hinge.



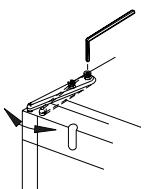
- 5) Adjusting the bottom door: Loosen the 3 screws in the bottom hinge and push the bottom hinge to the required side. Tighten the screws and mount the kick panel.



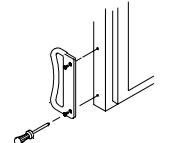
- 6) Bottom door adjustment: Move the 4 screws in the bottom angle iron to the desired side. Tighten screws and mount the skirting board.



- 7) Top door adjustment: Loosen the screws in the door hinge on top of the door. Loosen the hinge above the door and turn the hinge to the desired position. Tighten the screws.

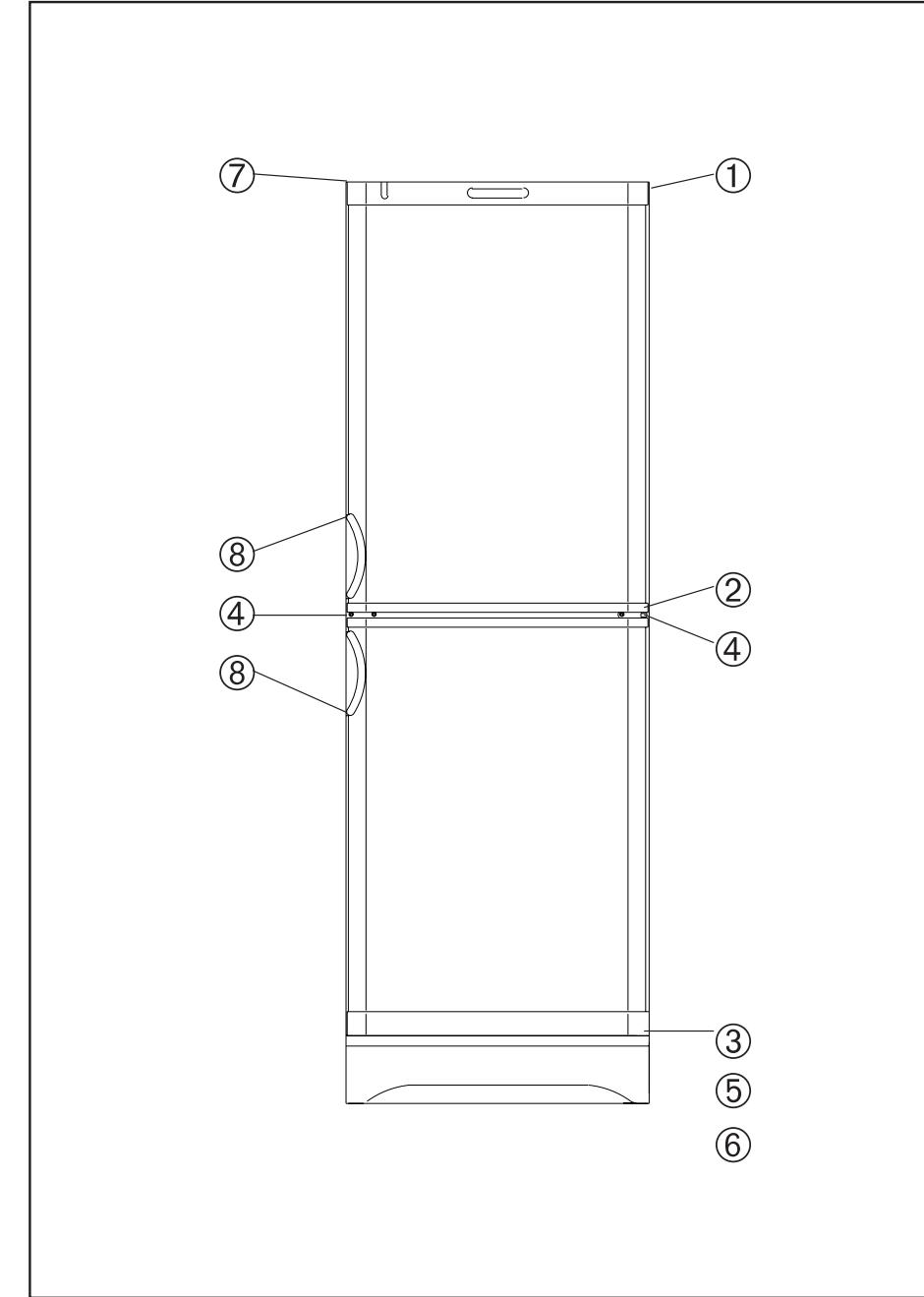


- 8) Move the handle.



## 3. Trouble-Shooting

- 3.1. Trouble-Shooting Chart
- 3.2. Trouble-Shooting in the Electrical Circuit
- 3.3. Checking for Leakage to Frame
- 3.4. Compressor Failure
- 3.5. Trouble-Shooting for Electrical Faults in the Compressor
- 3.6. The PTC Starting Device
- 3.7. Using a Manometer in Trouble-Shooting





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